

An investigation on Financial Literacy: a case of Southern Punjab, Pakistan

Amna Hasnain (Corresponding author)

Institute of Management Sciences
Bahauddin Zakariya University, Multan, Pakistan
amna.hasnain@bzu.edu.pk

Sana Batool

Department of Commerce
Bahauddin Zakariya University, Multan, Pakistan

Ibn e Hasan

Department of Commerce,
Zakariya University, Multan, Pakistan

Aqsa Altaf

Department of Commerce
Bahauddin Zakariya University, Multan, Pakistan

Abstract

Financial literacy is recognized as the core skill for the people participating in the financial markets. It plays a crucial role in creating an environment that promotes desired financial behaviors. It helps people in making more informed financial decisions. It's the matter of concern for both developed as well as developing countries. In Pakistan, financial literacy is deemed as the main reason of poor financial inclusion. In this study we aimed to measure the basic and advance financial literacy among the portfolio investors of Punjab by using the tools suggested by the OECD and Lusardi (2008). Previously, basic financial literacy was measured either on the basis of understanding of basic finance terms or on the basis of modules devised for HRS (2004). These are the two extreme sides of the continuum of financial literacy. Prior one follows a simple criterion to measure it by asking people whether they have heard about or understand the basic finance terms or not. While the later method is a complex one which measures one's financial literacy on the basis of people's understanding of finance concepts like numeracy, risk diversification and inflation. There was a need to have an intermediate way of measuring financial literacy. So operationalizing the definition of OECD, we are not only concerned about the people's understanding of finance terms but also their attitude and behavior about those financial terms by

asking them whether they are in contact with these terms or not. And by using the set of questions adopted from HRS used by the most of the studies done on financial literacy, we measured advance financial literacy. It is a descriptive study in which quantitative methodology is used. We used simple descriptive statistics for measuring basic and advance financial literacy and sources of information.

Keywords: Financial Literacy, Pakistan,

1. Introduction

Financial literacy is recognized as the core skill for the consumers who are actively participating in the financial markets (Kefela, 2010). It is a dynamic process, which starts with communicating the information and ultimately empowering the people to take actions in order to enhance their financial well-being. Financial literacy plays a crucial role in creating an environment that promotes desired financial behaviors (Grohmann, Kouwenberg, and Menkhoff, 2015). It enables people to make more informed and better financial decisions by giving them the opportunity to understand and mitigate the risk (Kefela, 2010). Studies reveal that the people purchasing financial products and services possess little knowledge about them as compared to the providers (Shen, Lin, Tang, and Hsiao, 2016; Van Rooij, Lusardi, and Alessie, 2011; Lusardi and Mitchell, 2007, 2008; National Council on Economic Education (NCEE), 2005; Hilgert, Hogarth, and Beverly, 2003). Undoubtedly, financial illiteracy is an obstacle for the accurate understanding of financial information. OECD defines financial literacy as follows:

“Financial literacy is the combination of consumers’/investors’ understanding of financial products and concepts and their ability and confidence to appreciate financial risks and opportunities, to make informed choices, to know where to go for help and to take other effective actions to improve their financial well-being”.

For the developing country like Pakistan, residing at the bottom of economic pyramid, financial literacy is the most relevant concern. Government of Pakistan has launched many programs in order to enhance financial literacy in Pakistan. Despite these efforts, Governor State Bank of Pakistan is of the opinion that level of financial inclusion remains very low that make us believe that the desired results couldn't be achieved through the programs launched by the regulatory authorities. 56% of the population of Pakistan is financially excluded from which the 40% population has reported financial illiteracy as the main reason of this financial exclusion. So there is a need to re-evaluate the programs that were developed on the finding of Access to Finance Survey. Access to finance survey (A2F) was conducted in Pakistan whose design was based on a joint methodology formulated by the Fin Mark Trust (South Africa) and World Bank. The study was a comprehensive study indeed covering all the major aspects which includes measuring people's financial literacy by asking them about their understanding of common finance terms and their

attitude towards those terms. But what makes the difference is we have used more complex internationally used financial terms which were not used in A2F study. These terms are the financial products; most of them are not commonly used by the households. Instead of going to households and asking about their understanding, we went to the literate investors and asked about their understanding of financial products and services.

We measured basic financial literacy not only on the basis of understanding of financial products but also on their usage that whether they currently hold those products or not. This has made the financial literacy concept more specific. So according to our findings, an investor is having a basic financial literacy, if he has knowledge about the financial products, and he is investing in those products for two years. This has increased the significance of our study, as it is giving a most recent picture of the situation of financial literacy among the investors while limiting the criteria of entitling a person financially literate or illiterate. A2F survey didn't go for measuring the level of financial literacy. In our study going beyond just labeling the person financially literate or illiterate, we went for determining the level of financial literacy among the investors of southern Punjab. There are a large number of investors in Pakistan who are investing. Only the unit holders of NIT funds are 48,169. So this was important to determine the level of financial literacy among the investors, because this could help the policy makers in developing better financial literacy programs in order to attract more investors. This study will contribute in the government's efforts to make the nation a financially literate by accelerating the NWFL program and ultimately enhancing the financial inclusion. It will help the government to launch programs like "the hole in the wall" in order to literate the investors in order to motivate them to invest in innovated financial products. So the objective of our study is to measure the basic financial literacy and advance financial literacy among portfolio investors of southern Punjab.

2. Literature Review

According to Remund (2010), without knowing something about money one cannot manage it effectively. Certainly, an improved financial literacy can enable the individual to make the best use of the situation and can make sincere efforts for his economic well-being (Braunstein & Welch, 2002). Street (1997) advocates the ideological model of literacy which says that a literate person is someone who can read a particular type of text in particular time and does it in a particular way (Gee et al., 1996). The major focus of this model is on the definitions, methods and effects of literacy efforts. The model claims that literacy is all about knowledge and the ways in which people practice reading and writing. Hence, financial literacy may include the people's ability to keep track of their daily spending, payment obligations, knowledge about account opening for retirement savings, understanding about the health and life insurance and also the plans for future finances (Emmons, 2005).

Emmons' definition emphasizes on some specific financial responsibilities that are necessary for the individuals to be considered as financially literate. This

definition has laid the foundation of operational definition of financial literacy away from conceptual definition that has allowed the financial literacy to be measured with some ease. So financial literacy is not just having financial knowledge but the one's ability to prepare him for unexpected situation and manage resources wisely. Researchers also argued that having a profound ability of decision making is as much important as having skills to manage the personal finances effectively. For effective money management, decision making skills are critical. The scholars like Stone, Weir, and Bryant (2008) described those individuals as financially literate who can successfully manage their debts while making effective decisions. Mandell and Klein (2007) provide evidence that people don't make financial plans and hence result in poor decision making.

We are having a very little number of studies that provide information on financial literacy and the constructs of financial decision making like saving and investment decisions, portfolio choice and planning (Van Rooij, Lusardi, and Alessie, 2011). To overcome the problem occurring because of insufficient data, Lusardi and Mitchell (2008) developed a module for health and retirement study (HRS) in 2004. The aim was to assess the knowledge about three basic financial concepts compulsory for every individual who is going to make financial decision. They presented their findings that financial illiteracy is common among the different groups of population. Lusardi, and Mitchell, (2007) make a thoughtful contribution to the existing literature that potential investors are simply unfamiliar with the basic economic concepts compulsory for utilitarian decision making. Enlarged level of financial unsophistication is also described in studies on smaller groups (Mandell, 2004; Agnew and Szykman, 2005; Bernheim, 1995, 1998). Researches carried out by the Lusardi and Mitchell (2007) and Organization for Economic Co- operation and Development (2005) and provide the evidence that financial illiteracy is widespread in developed countries as well.

Research in financial literacy has three traditions (Almenberg and Widmark, 2011). Firstly, the level of financial literacy is being measured on the basis of different demographic areas (Almenberg and Widmark, 2011; Huston, 2010; Jappelli, 2010; Lusardi and Mitchell, 2007).

Secondly, the impact of financial literacy on financial decisions is being studied (Almenberg and Widmark, 2011; Johnson and Sherraden, 2007; Lusardi and Mitchell, 2007; Van Rooij, 2007; Carter, 1973). Thirdly, the effects of financial education are studied (Fox, 2005; Willis, 2009 Lyons, 2006; Oehler & Werner, 2008; The World Bank, 2009).

Most of the research on financial literacy is being done on the cognitive dimensions of the concept and focuses on how much people have understanding of basic finance concepts. Researchers have used subjective approach to measure the financial literacy like self-assessment (Robb and Woodyard, 2011; Allgood and Walstad, 2011). Demographics and other social factors have also played important role in financial literacy. According to Lusardi & Mitchell (2008), financial literacy

level is low among the older woman and they do lack in future financial planning. They also mentioned that people with low income and education are those with low level of financial literacy. Researches have also focused on the relationship between the financial literacy and financial behavior (Xiao, 2010) and it has been mentioned that there is a positive relationship between literacy and saving behavior. Lusardi, and Alessie (2012) have presented their findings that the people with higher level of financial literacy are more likely to plan and save for future. Allgood and Walstad (2011) presented the similar findings and recommended that the further research should be conducted on the relationship between other financial behaviors and perceived level of literacy. Nevertheless, there is difference between the financial knowledge and perceived financial knowledge but they are correlated with each other and they both effect the behavior (Robb and Woodyard' 2011).

In the paradigm of credit management, Scheriner (2004) has proposed that people having better financial knowledge and experience are less exposed to the bad loan risks. Effective credit management techniques learnt through financial literacy may reduce the default risk of mortgages (Hartarska and Gonzalez-Vega, 2005). People with low level of debt literacy are found to bear more cost of borrowing as compared to the people with better knowledge (Lusardi and Tufano, 2009). Similarly in USA, women and university use to get engaged in the borrowings with high cost and costly credit card behavior is also being observed. This behavior is also associated with low financial literacy (Lusardi and de Bassa Scheresberg, 2013 & Mottola, 2013). Duca and Kumar (2014) observed other phenomena of mortgage equity withdrawals. They argued that people with low level of financial literacy are more likely to withdraw housing equity.

Studies revealed that people are reluctant to hold stocks (Campbell, 2006). Davis, Kubler and Willen (2006) tried to address this issue in their study and argued that the wedge between lending and borrowing rates might be the reason behind less ownership of stocks. Guiso, Sapienza and Zingales (2005) considered trust and culture issues as the reason behind this problem while Hong, Kubik and Stein (2004), and Brown, Ivkovich, Smith, and Weisbenner (2007) considered the peers' pressure as the main reason. However, limited numeracy and cognitive ability (Christelis, Jappelli and Padula, 2007), lack of asset awareness (Guiso and Jappelli, 2005), and lack of financial sophistication (Kimball and Shumway, 2006) are also the reasons of this low ownership. So, enlightening the level of financial literacy leads people to the improved and confident investment decisions.

3. Methodology

We are going to follow quantitative paradigm in our study while positivism as a philosophical position inclined to pragmatism. The rationale behind using the positivists' approach is that the study is quantitative as it is focusing on measuring the basic and advance financial literacy among the portfolio investors. Following the positivists epistemological perspective, a scientific approach is used in order to measure the financial literacy (Firestone 1987; Saunders et al. 2009). The data is collected through a process in which the investors are asked to fill a questionnaire

which includes the questions for basic and advanced level literacy. Survey method is used in order to gather the data. In the study, the basic and advance levels of financial literacy are determined, so our unit of analysis is those individual investors who are investing in stock market and mutual funds because the part of questionnaire in which advance financial literacy is measured includes questions about the stock market. The questionnaire is used to collect primary data which is having structured close ended questions. The first part of the questionnaire contains investors' profile while second part of the questionnaire is taken from the questionnaire of OECD which was initially designed to measure the financial literacy. The OECD questionnaire is used because it is the most widely used tool. The OECD International Network on Financial Education (INFE) has developed a survey instrument that can be used to capture the financial literacy. The questionnaire is designed to be used in face-to-face or telephone interviews. We have taken a part of the questionnaire from OECD designed questionnaire that was named as the basic level literacy questions which includes the some common financial terms that are labeled as the indicators of financial literacy. This basic literacy part includes three questions. 1. Whether the respondent has heard about these terms. 2. Whether they are currently holding any of these products. 3. In last two years which of the following products you choose? The second set of questions is from the questionnaire that was being used in health and retirement study done by Lusardi and Mitchell (2010) is labeled as advance level literacy questions. The purpose is to determine the level of financial literacy that people are having basic understanding of the concepts or they are having more advance knowledge of the concepts. We used snowball sampling technique. We select a group of investors who were our initial respondents and then asked them to help us in finding other investors. This technique is helpful because our population was difficult to enumerate. Total sample size is 109.

4. Findings

For descriptive analysis of the demographical variables which include gender, age, marital status, qualification, formal education of finance, experience of investing and investment style (personally or jointly), we computed frequencies with the help of SPSS. Our 23% respondents were female and 77% respondents were male. 27% respondents belong to the age group 20 to 30 years, 42% respondents' age is between 31 to 40 years, 23% respondents' age is between 41 and 50 years while remaining 7% respondents belong to the 51 to 68 years age group. It shows that most of our respondents are of ages between 31 to 40 years. Similarly, the qualification of our respondents is also described in groups. 9% respondents' qualification was between classes 1 to class 5. It means they could just read and write and are considered as literates as per the definition of a literacy in Pakistan. 14.7% investors' qualification was above primary to matriculation. 31% respondents were those, whose qualification was above matriculation to graduation and 45% respondents were those who has masters or MPhil degree.

62% investors said that they have no formal degree of finance while our 37% respondents had formal degree of finance. Married investors were 76% while

24% respondents were unmarried. 64% of our respondents were those who were just new entrants in the financial market or having experience of 5 years. 22% investors were having the experience of 6 to 10 years, 7.3% respondents said that they have experience of 11 to 15 years while only 6.4% investors were those whose experience was 16 to 20 years or above.

Basic literacy is measured by asking our respondents three questions about the commonly used financial terms as mentioned by OECD in their questionnaire. We asked them that whether they have heard about those terms or not? The respondents had to give their responses either yes or no. For this question our product wise findings are as follows:

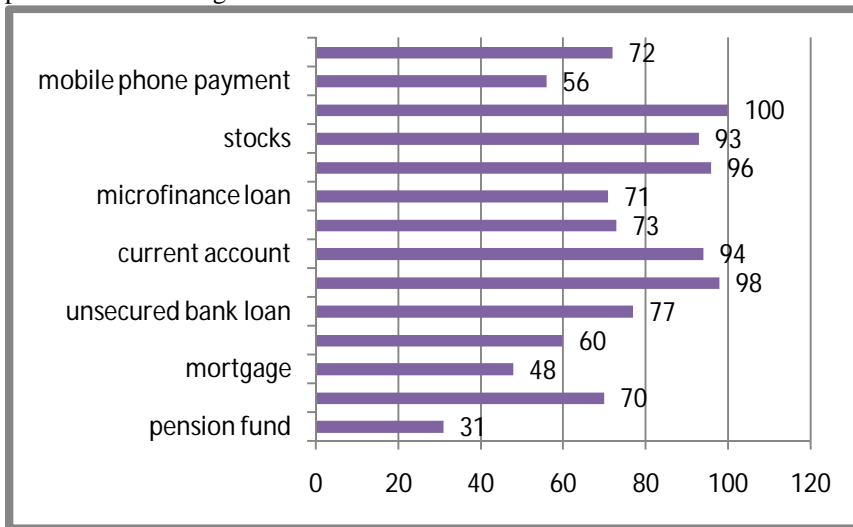


Fig. 1. Basic Literacy Q1

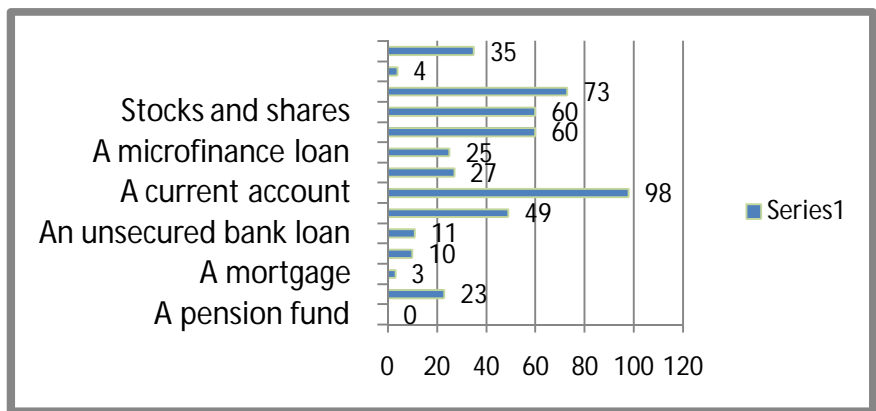
The graph shows that 31% respondent said that they have heard about pension funds. They are less in numbers as compared to other financial products and service because this term is just recently introduced in Pakistan and still many people are unaware of this type of fund. 70% respondents said that they are aware of the investment account because our respondents were portfolio investors and most of them were investing in investment account like unit trust. Similarly 48% respondents said that they have heard the term mortgage. Again their number is low because mortgage type of loan is not very common in Pakistan.

60% respondents said that they have heard about a bank loan secured on property. While 77% said that they have heard about an unsecured bank loan. 98% said that they are aware of the term credit card. 94% said that they have awareness about current account. Similarly the percentage of respondents claiming that they know about a saving account is 73%, while for microfinance loan its 71%. Percentage for the people saying that they know about insurance is 96%. 93%

respondents said that they know what stocks and shares are. Percentage of giving their response yes about bonds is 100%. 56% said that they know the term mobile phone payment account while 72% said that they know about prepaid payment account. Hence average of the overall percentages of individuals is 72%. This percentage for basic literacy part 1 is justifiable because although our respondents have not got the formal education of finance but they are investors. So there knowledge about these financial terms is not an immense matter of marvel. Knowing about the financial terms is not enough to make someone financially literate. One must hold these financial products for a period of time as per OECD at least for two years in order to have a complete understanding of that product and service. Statistics about the second question of the basic literacy part which was whether the respondents are currently holding any of these types of product are as follows:

Fig. 2. Basic Literacy Q2

As pension funds are recently introduced by the financial institution, so percentage of using these funds is 0%. 23% respondents are using unit trust investment account; only 3% respondents have been currently taking the facility of mortgage loan while 10% respondents are currently holding an unsecured bank loan. Percentage of respondent investors holding an unsecured bank loan is 11% while for those taking the facility of credit card is 49%. 98% respondents said that they use current account, 27% respondents were using a saving account, 25% were currently holding a microfinance loan, and 60% respondents were those who are in contact with insurance and stocks and shares. 73% respondents were those who were holding bonds while 4% were saying that they are getting benefit of mobile phone payment account and 35% were using prepaid payment card. So average of the percentages of all the respondents currently using any of these products is 32%. Now it's the turn of 3rd question of basic literacy part which was: in last two years which of the mentioned products you choose whether you are currently holding them or not. The bar chart for this question is as follows:



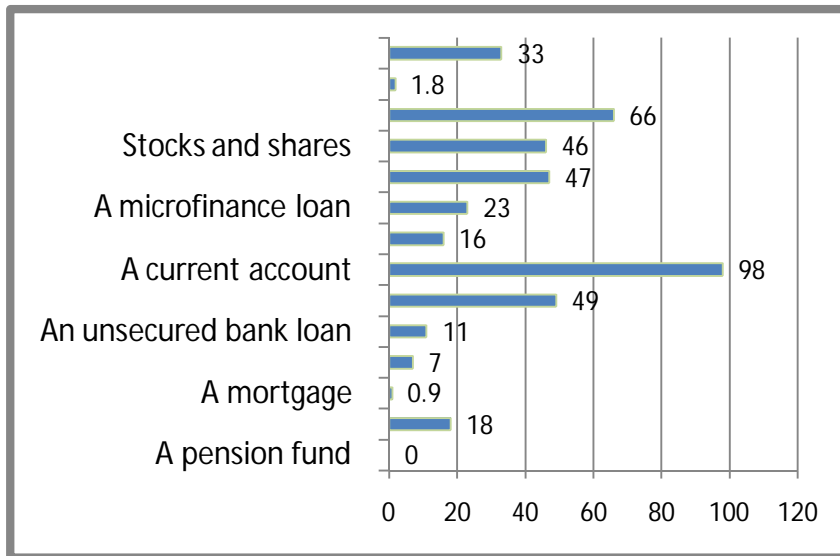


Fig. 3. Basic Literacy Q3

These figures are different from the figures of responses of 2nd question of basic literacy part. Overall average of the percentages of the respondents who said they choose any of these products in last two years is 29%. But for few products the number of users got reduced as compared to the respondents of second question. It means that some respondents have just started using products like for bonds, stocks and insurance. We measured advance financial literacy in order to improve our assessment about financial literacy by using a module for HRS 2004. Advance financial literacy is named as sophisticated financial literacy in literature (Van Rooij, Lusardi, & Alessie, 2011). For this eleven questions were asked by the every respondent and they have to choose the best option among the given one. These questions aim to explore the respondents' knowledge about the much difficult financial concepts that are bonds, stocks, mutual funds, risk diversification and tradeoff between and 0 for wrong answer. Here is the bar diagram for the responses of individual investors: risk and return. So we gave values as 1 for right.

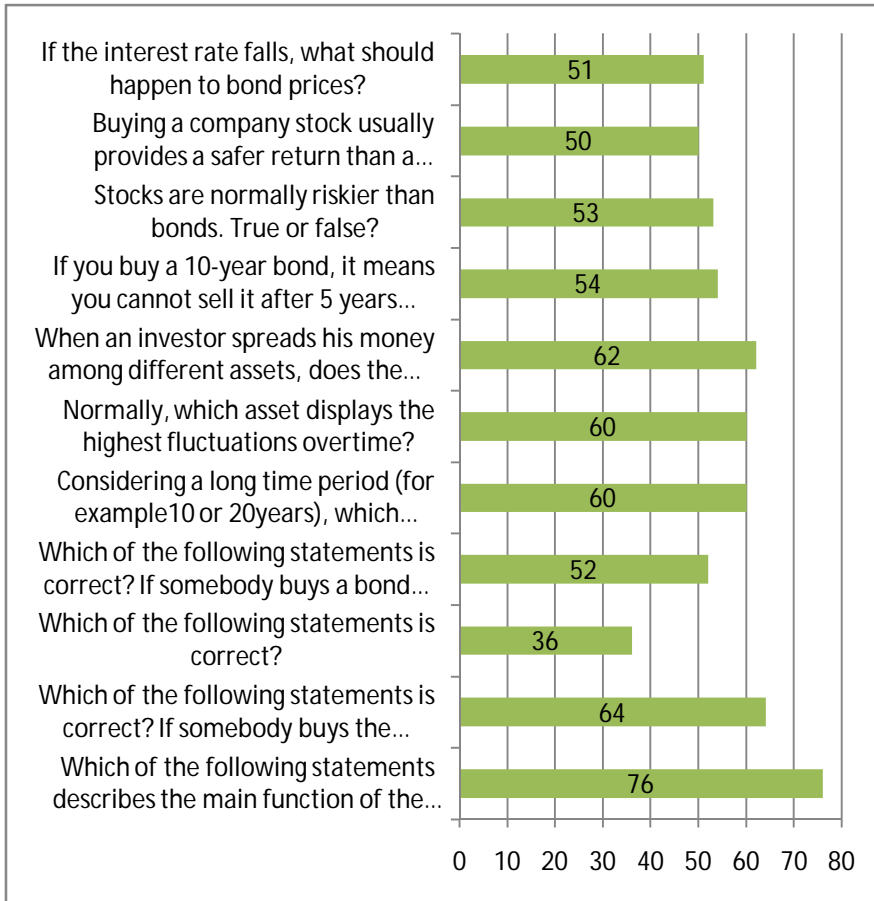


Fig. 4. Advance Literacy

The results show that a substantial number mostly more than 50% of investors were able to give correct answers. Respondents found first question which was about stock market easy to answer and percentage of correct answer for this question is highest that is 70%. While respondents found third question a bit difficult to answer which was about mutual fund and percentage of correct answer for this question is lowest. The percentage of correct answers for other questions is approximately 50% and 60%. The percentage of respondents giving correct answer for questions about bonds and stock is also substantial. So overall the respondents find this section easy to respond. In order to set a single criterion to describe the basic financial literacy of the respondents, we combined the responses of those three questions about the financial products and services. Following the definition of OECD, which described financial literacy as the understanding of financial products and concept, we decided not to rely on the criterion set in A2F which measured literacy on the basis of whether the respondents have heard about the financial terms

or not. The person who was able to give a yes answer to all three questions was having basic financial literacy. Following this criterion, the number of investors having basic financial literacy is just 43. While other 66 investors are not fulfilling the criterion to be qualified as financial literates. If we follow the criteria of A2F survey, then our 99% respondents are having basic financial literacy.

Similarly we developed criteria for advance financial literacy. a respondent who gave correct answer for at least 35% questions will be having advance financial literacy. So we assigned value 1 for our respondents. Otherwise no the respondent isn't having advance financial literacy. On that criterion 75 respondents were able to give correct answers for almost 35% questions out of 11. This criterion is developed arbitrarily as done in A2F survey.

5. Discussion

The rationale behind measuring the basic and advance financial literacy was to give the regulatory authorities a clearer picture of the levels of financial literacy among the investors of Pakistan so that they could devise some better programs in order to enhance financial literacy and ultimately financial inclusion. In previous studies like the study of Lusardi, & Mitchell, (2008), Lusardi, Mitchell, and Curto, (2010), Van Rooij, M., Lusardi, A., and Alessie, R, (2011) Lusardi, and Mitchell, (2011) and many other preceding studies used the tool devised for HRS for USA. The tool consists of two sets of questions. First set was aimed to measure the basic financial literacy among the households, women, young students and the retired workers. These questions used to measure the people understanding of numeracy, interest compounding, inflation, time value of money and money illusion. While the second set of questions was aimed to measure the advance literacy level of respondents. These questions were aimed to test the people's understanding of stock market, stocks and bonds. All these studies gave univocal results that people's overall financial literacy is low and due to that they cannot make well informed profitable decisions. In Pakistan and in other 14 countries, financial literacy was measured on the basis of understanding of basic finance terms (Croy, Gerrans, and Speelman, 2010; van Dalen, Henkens, and Hershey, 2010; Worthington, 2008), and on that basis, basic financial literacy results might be misleading. If you are going to a person and asking him that have you ever heard about the word bank and understand what it is? His possible answer might be yes. But what is his attitude and behavior towards this term is also the matter of concern as per the definition of financial literacy by OECD. So we decided to measure the basic financial literacy not only on the basis of investors' understanding of finance terms but also about their behavior and attitude towards those terms by asking about whether they hold any of these financial products for last two years. When we asked people that whether they have heard about these financial terms, the basic financial literacy rate was 99%. But when we asked about their behavior about those terms the results were totally different and now the basic financial literacy rate was 39% only.

We measured basic financial literacy with the help of arbitrarily developed criterion as done in the A2F survey. The respondents were given the names of

fourteen different financial products and services and we asked three questions about those products and services. The first question that was whether you have heard about those financial products or not, above 50% respondents said that they have understanding of these terms except for pension fund which are recently introduced product and people are hardly familiar of this product. While the percentage of investors saying that they have understanding of terms like bonds, stocks, insurance and current accounts is above 90%. If we analyze the responses for second question that whether they currently hold any of these products or services, then we found that the number of investors having a current account is maximum that is 98%. Similarly as our respondents are portfolio investors investing in stocks, bonds and different types of funds, so after current account the users of bonds, stocks and insurance are high in number that is 73%, 60% and 60% respectively. The number of investors investing in mortgages, bank loans and pension fund are less.

To further strengthen our basic financial literacy definition, we included the responses of third question that was in last two years, which the products you have chosen. Now the users of the products and service got reduce in number. It means that some of our respondents have just started investing in mentioned products and services. These last two questions have changed the scenario and helped us to measure the basic financial literacy not only on the basis of heard but also on the basis of investors' attitude and holding those products behavior. That's how we are able to fill the gap that we found in literature and we raised the objection on measuring the financial literacy.

The second part of the questionnaire was aimed to measure the advance level of financial literacy among the investors of Pakistan. We asked 11 questions from our respondents which were developed to test the people understanding of stock market, stocks and bonds. The percentage of correct answers for ten questions is above 50%. And when we developed a single criterion to measure the advance financial literacy, we found that 68% of our respondents fulfill the criteria of advance financial literacy. This is actually higher than the basic financial literacy rate. Ideally it should be less than basic financial literacy as the literature provides us the evidence (Lusardi, and Mitchell, 2008; Lusardi, Mitchell, and Curto, 2010; Van Rooij, Lusardi, and Alessie, 2011; Lusardi, and Mitchell, 2011). But our findings are different from the previous literature. The reason is simple that is our unit of analysis. Our respondents were portfolio investors, mostly investing in stocks, bonds and funds. So their understanding about these concepts is justifiable. While previous studies were conducted on households, young college students and household women. That is why our findings are different from the previous findings. And as the advance level financial literacy is not previously measured in Pakistan so our study is fulfilling the gap.

This study adds up in the existing literature in many ways. Existing studies has used the methods given by Lusardi and OECD in order to measure the financial literacy and the levels of financial literacy among the households. In spite of using any of the existing extreme tools of measuring financial literacy, we used an

intermediate context relevant tool for measuring financial literacy. On that basis, the study hasn't considered only those people literate, who have heard about the finance terms. But by focusing on the understanding, we considered only those people as financially literates, who came across with these financial terms in last two years. So the criterion to measure financial literacy has become more specific. And as our unit of analysis is also the portfolio investors of southern Punjab, so the study has more attraction for the providers of the financial products and services. They need to educate the existing investors to invest in the newly introduced products and services. With the help of findings of our study, the government of Pakistan and regulatory authorities might be able to improve their financial literacy programs and financial inclusion.

6. Research Limitations

The major limitation of this research is that we didn't have any already well-established financial literacy index in order to measure the financial literacy. Previous studies do provide the methods to measure the levels of financial literacy but unable to provide a comprehensive index or scale to measure financial literacy on the basis of OECD definition. So we had to develop it arbitrarily as done by the Access to Finance survey. Other limitation of this research is low sample size. Our sample size is low because it was actually a difficult task to find the portfolio investors in southern Punjab. Geographical area location is also another limitation of our research. We were limited to the investors of southern Punjab. For a diverse dataset we might include other geographical areas but due to the shortage of time and resources, we were restricted to the southern Punjab only. Our study is a cross sectional study. It could provide a better and a clearer picture, if it would be a longitudinal study.

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